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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,357	10/20/2005	Philippe Pardo	26214	3786

22889 7590 07/02/2009

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EXAMINER	
PARKER, FREDERICK JOHN	
ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
07/02/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

USIPDEPT@owenscorning.com

Office Action Summary	Application No.	Applicant(s)	
	10/538,357	PARDO ET AL.	
	Examiner	Art Unit	
	Frederick J. Parker	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 22-33* is/are pending in the application.

4a) Of the above claim(s) *31-33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,22-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/4/09 has been entered.

Election/Restrictions

2. Newly submitted claims 31-33 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: claims 31-33 as written and read in view of the specification (specifically p/15,15-p.16,29; Ex. 6-7 cited as support for claims by Applicants) are a method of forming a composite panel of numerous layers / core which steps extend far beyond the subject matter of class 427 to which prior claims are addressed. Claims 31-33 appear to be class 264/241+ and/or possibly class 156.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 31-33 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1,22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claims 1,22 are vague and indefinite because line 6/5 respectively cites "organic material capable of forming a matrix" but the remainder of the claim does not cite a matrix formed from such material, so it is unclear if the organic material merely needs to be capable of forming a matrix or it actually does; further its presence in the composite while the yarns are converted into "a matrix" is confusing; it is further unclear if the Organic materials" of lines 6/5 and 8/8, respectively are the same or different components. For examination, it is interpreted the yarns contain an organic which forms a binder/ matrix component and there is at least one "reinforcing component" which mechanically or otherwise reinforces the composite, and that heating forms yarns within the matrix/ binder, also containing embedded reinforcement material, and at least one surface does have a smooth surface coat due to the powder depositing step. Applicants are respectfully requested to clarify claim language. If Applicant wishes to discuss, the Examiner is always invited to initiate an interview to seriously discuss issues at hand.
- Claim 22 is vague and indefinite because the relative term "high" does not convey "film forming capability", it is not defined, or ascertainable by one of ordinary skill.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-11,22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sprengling US4496415 in view of Jeffs EP 410 678A2.

Sprengling teaches a method for forming "composite" sheets comprising providing a continuous sheet (= mat) fibrous substrate 2 (cited as wovens , fabrics of cotton, polyester, glass (claim 6) , etc col. 3, 34-37 and elsewhere) by "depositing" it onto a moving belt ; applying an organic dry resin powder 7; applying heat and pressure ("compressed") to cause the resin to flow into the fibrous materials to wet and adhere the fibers; inherently cooling the product to provide an end-product with utility and which is also cut as desired via means 32 to form products 33 in sheet form given the process (col. 5, 3-53 and figures). Thermoset resins including epoxy are cited (col. 3, 46; top col. 4; etc) per claims 2,4. It does not appear the reference teaches the deposited continuous fiber substrate contain at least one organic and reinforcing material. Jeffs teaches a related process for forming a fiber reinforced plastics composite sheet, in which a permeable fiber sheet is coated with a surface layer of particulate which is then treated to form a layer with improved surface finish because the layer prevents strike-through of reinforcing fibers at the surface, and which also includes one or more of a thermoplastic or thermoset resin without further limitation (claims 2-3); carbon, etc which meets the claimed requirement for at least one

organic and reinforcing material (col. 24-40). Polypropylene is a specific example of a material used for the surface coating, col. 5, 42; per claim 28. Further elaboration on column 8 discloses that the fiber-bearing layer 2 may be formed by a mixture of continuous or chopped fibers admixed with resin binders, e.g. in powder form, or thermoplastic (encompassing polypropylene per claim 27) binder filaments as disclosed in US 3328383 which is part of the disclosure of Jeffs because it is incorporated by reference and therefore a valid part of the disclosure. Column 1 of '383 further teaches that use of resinous materials to bind fibers to make mats or performs was "well known" in 1967. Thus, the addition of a smooth coating as disclosed by Jeffs into a continuous web containing an organic binder material and additional reinforcement (organic, carbon, etc) is merely a combination of known steps and elements known from the prior art to provide a predictable and apparent outcome, namely a fiber-reinforced web in which the heat-pressure treatment step causes formation of a matrix containing fiber and fused organic material.

Per claims 5,7,9,26 ; the amount of reinforcing materials defined by the prior art as being any thermoset or thermoplastic, and coating layer / "topcoat" thickness or amount applied would obviously have been dependant upon the end-use, with optimization determined by routine experimentation. Per claim 10, it is apparent the stacking of fibrous structures to form the laminate constitutes the "at least one intermediate structure" of claim 10 since one layer would be intermediate plural of other layers. The product structure comprises fibrous layers and organic films therein and in between per claim 11. The selection of suitable amounts of each ingredient in a formulation is deemed obvious optimization, In re Peterson 65 USPQ2d 1379. Similarly, claim 29, the pressure utilized would have been determined based upon materials and processing parameters including, but not limited to, heat, thermal properties of the resin coating material/s

used, desired degree of penetration, desired viscosity of the molten coating material during treatment, and so on.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Sprengling by incorporating the at least one organic and reinforcing material as disclosed to be known by Jeffs because of the predictability of the outcome of combining known steps and elements in order to produce a desired end product.

As to claim 23, the selection of an organic with sufficient optical properties to make the matrix reinforcing fibers "invisible" would have been a matter of choice and development by routine experimentation to achieve a desired aesthetic outcome which otherwise has no effects on the mechanical or other properties of the composite. Matters related to the choice of ornamentation producing no mechanical effect or advantage considered to constitute the invention are considered obvious and do not impart patentability, In re Seid 73 USPQ 431.

As to claim 24, since the prior art teaches coating surfaces to form a smooth surface ("topcoat") by preventing strike through of reinforcing fibers, and a mat has multiple major surfaces, the coating of one or more surfaces to achieve the same end would have simply been an obvious variation within the purview of one of ordinary skill.

As to claim 27, there is no limitation or prohibition regarding the similarity or dissimilarity of the coating and reinforcing organic materials; use of the same or compatible materials is simply an obvious variation within the purview of one of ordinary skill to maximize mechanical properties.

Per claim 29, the impregnation step of Sprengling would have constituted a step of forming an intermediate structure to improve sheet characteristics, e.g. mechanical and other properties,

which meets the limitation of the claim read in light of page 11, 5-30 of the specification cited by Applicants.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571/272-1423. The fax phone number for the Primary Examiner, Art Unit 1792organization where this application or proceeding is assigned is 571-273-8300.

Frederick J. Parker
Primary Examiner
Art Unit 1792

/Frederick J. Parker/